Speedaire® Refrigerated Compressed Air Dryers

ENGLISH

Dimensions

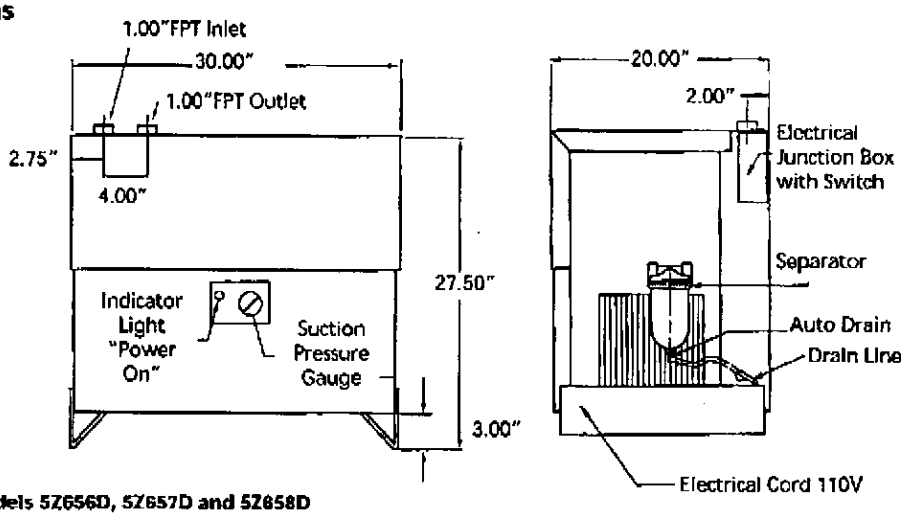
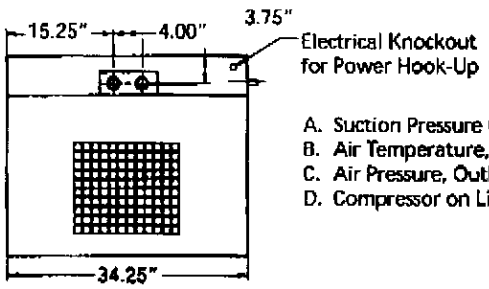


Figure 2 – Models 5Z656D, 5Z657D and 5Z658D



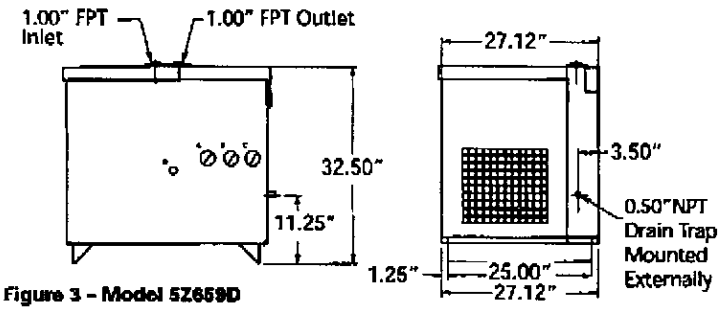


Figure 3 – Model 5Z659D

General Safety Information (Continued)

4. Standard equipment is supplied with NEMA 1 electrical enclosures and is not intended for installation in hazardous environments.
5. Air treated by this equipment may not be suited for breathing without further purification. Refer to OSHA standard 1910.134 for the requirements for breathing quality air.

Installation

LOCATION

1. Dryer should be installed so there is sufficient room around the unit to permit circulation of air through refrigeration condensing unit.
2. Locate dryer indoors, in a protected area, where ambient temperature will range between 45° and 100°F.

INLET & OUTLET CONNECTIONS

1. Connect compressed air lines to inlet and outlet connections marked on the cabinet. Be certain air passes through air dryer in proper direction. On all models, the air lines should be connected with standard pipe fittings.
2. It is recommended that a by-pass line be piped around the air dryer.
3. Shutoff valves should be installed at both inlet and outlet with another valve in the by-pass line. This would permit dryer to be removed from system or serviced without turning off the air.

DRAIN TRAP

1. Condensate separator and automatic drain are used as standard with every dryer.
2. The automatic drain is assembled into the bottom of the separator (See Figure 4). The water, accumulating in the bowl, will lift the float and actuate the drain valve.

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Maintenance (Continued)

IMPORTANT: Do not clean the float with any kind of solvent even if it is coated with oil. Use detergent or household cleaners only.

REASSEMBLY FOR ALL MODELS

1. Reassemble everything and leave a certain amount of cleaning solution in the bowl.
2. Tighten the ring nut and pressurize the dryer.
3. Manually discharge the solution through drain.
4. If the drain does not work, disassembly and internal cleaning or replacement is recommended.

Helpful Maintenance Tips

- Keep condenser free of dirt
- Clean drain trap on a scheduled interval
- Maintain suction pressure of 58-62 psi (R-22)
- Maintain suction pressure of 30-34 psi (R-134A)
- Maintain ambient temperature of 45°F - 100°F

} WITH NO COMPRESSED AIR LOAD

- Clean separator filter element on a scheduled interval
- Do not exceed dryer rated capacity
- Do not cycle dryer with air compressor
- Call service technician with any problems concerning the refrigeration system operation

Minor Suction Pressure Settings

Factory settings (58 to 62 psi under no load) (30 to 34 psi for 5Z656D) may change during shipment or occasionally during normal operation conditions. To adjust the suction pressure, proceed as follows:

1. Turn off or by-pass the compressed air.
2. Remove the dryer cover and locate the adjustable control valve (See Figure 5).
3. Turn 1/2 turn at a time and wait 3-4 minutes for suction pressure to settle.
   a. Turn clockwise to increase pressure (temperature).
   b. Turn counter-clockwise to decrease pressure (temperature).

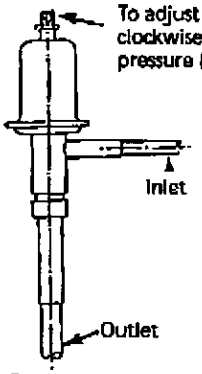

Figure 5

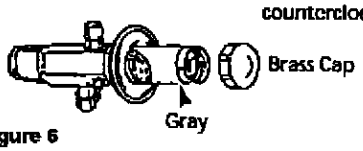

Figure 6

Models 5Z656D, 5Z657D, 5Z658D and 5Z659D

Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
Unit will not run	1. No power	1. Check power supply, fuses, circuit breaker
	2. Internal compress. Overload open	2. Feel the temperature of the compressor, allow it to cool off if hot. Observe the fan motor. Have the motor checked if it does not run. Clean condenser
Refrigerated suction pressure high (65 psi) (36 psi on 5Z656D)	1. Internal compress. Overload open	1. Check for air overload. Check inlet air temperature. Check operation of fan motor. Check room temperature, hold at 100°F or lower
	2. High ambient temperature	2. Condition ambient air or move to more suitable location
	3. Unit is freezing up	3. Check and clean condenser
Indicator light off	No power to the dryer	Check power supply fuses, circuit breaker
Refrigerated suction pressure low (54 psi) (freeze up) (26 psi on 5Z656D)	1. Low refrigeration charge	1. Have qualified refrigeration service check out dryer or call factory
	2. Low ambient temperature	2. Relocate dryer to heated area at 45°F or higher
	3. Low hot gas valve setting	*3. Readjust hot gas valve to 60 psi suction pressure (see below) (34 psi for 5Z656D)
High pressure drop	1. High air flow	1. Air flow above dryer rated flow
	2. Drain valve not discharging	2. Manually blow down drain until water flow stops. Clean drain
	3. Freezing moisture in evaporator	*3. Adjust suction pressure to 60 psi (see below) (34 psi for 5Z656D)
	4. Plugged separator/drain element	4. Clean or replace
Water downstream of dryer	1. Compressed air is flowing through dryer before it is turned on	1. Dryer must be operating 5-10 minutes before compressed air load
	2. Dirty drain trap	2. Disassemble and clean at regular intervals
	3. Overloading dryer above air flow capacity	*3. Reduce air load to dryer specifications
	4. High suction pressure	4. Inlet air temperature too hot
	5. Low outlet air pressure	*5. Freezing of water adjust suction pressure (see below)
	6. Low refrigerant charge	6. Contact service technician to check leak

NOTE: Checks or repairs of the refrigeration system must be done by a qualified refrigeration service technician with the required gauges and other equipment.

(*) All adjustments must be made under no compressed air load.

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LIMITED WARRANTY

DAYTON ONE-YEAR LIMITED WARRANTY. *Speedaire® Refrigerated Compressed Air Dryer, Models covered in this manual, are warranted by Dayton Electric Mfg. Co. (Dayton) to the original user against defects in workmanship or materials under normal use for one year after date of purchase. Any part which is determined to be defective in material or workmanship and returned to an authorized service location, as Dayton designates, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced at Dayton's option. For limited warranty claim procedures, see PROMPT DISPOSITION below. This limited warranty gives purchasers specific legal rights which vary from jurisdiction to jurisdiction.*

LIMITATION OF LIABILITY. *To the extent allowable under applicable law, Dayton's liability for consequential and incidental damages is expressly disclaimed. Dayton's liability in all events is limited to and shall not exceed the purchase price paid.*

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PROMPT DISPOSITION. *Dayton will make a good faith effort for prompt correction or other adjustment with respect to any product which proves to be defective within limited warranty. For any product believed to be defective within limited warranty, first write or call dealer from whom the product was purchased. Dealer will give additional directions. If unable to resolve satisfactorily, write to Dayton at address below, giving dealer's name, address, date, and number of dealer's invoice, and describing the nature of the defect. Title and risk of loss pass to buyer on delivery to common carrier. If product was damaged in transit to you, file claim with carrier.*

Manufactured for Dayton Electric Mfg. Co., 5959 W. Howard St., Niles, Illinois 60714 U.S.A.